

PRESSURE MODULE

4 CHANNEL BAROMETRIC



The output voltage of each channel changes with the absolute pressure applied to its pressure port. The gain, offset and thermal drift is digitally compensated to minimise errors and create a single-ended, amplified output in the 0 to 5 Volt range. The full scale output, zero offset and temperature compensation are digitally programmed at the factory. Generic values are shown here, other values can be set on request. The sensor is only suitable for use with non-corrosive gas and should not be used to measure electrically conductive media or media with a high water content. Trace quantities of water can be tolerated.

Electrical

- Compensated pressure range 800 to 1400mbar
- Supply voltage 9.4 to 16V unregulated
- Supply current 50mA max
- Output voltage at 800mbar $0.5 \pm 0.075V$ measured at 25°C
- Output voltage at 1400mbar $4.5 \pm 0.075V$ measured at 25°C
- Maximum output voltage 5V
- Non-linearity $\leq \pm 0.3\%$ FSO over compensated temperature range
- Hysteresis $\leq \pm 0.1\%$ FSO
- Combined thermal zero and sensitivity shift over compensated temperature range $\leq \pm 1\%$ FSO typical, $\leq \pm 2\%$ FSO max
- Maximum sink/source current per channel 0.45mA
- Insulation resistance $> 100M\Omega$ at 50Vdc
- Long term ageing $\leq 0.2\%$ FSO per annum
- Frequency response 3.2kHz

Gain and offset values for each channel, measured at 25°C, are supplied on a test result sheet.

The sensor is protected against short circuit between output and ground but it may be damaged if the output is connected to the supply or if a reverse bias supply voltage is applied.

Mechanical

- Weight 80g (including cable)
- Body aluminium alloy, hard anodised and dyed black
- Aluminium Boss for strain relief to the sensor body

Application

- Absolute pressure measurement of non-corrosive gas, e.g. Aerodynamic or cylinder to cylinder pressures.

Cable and Connection Definition

- 24 AWG un-screened cable
- Cable length is shown on the order details but any length is available on request
- Various automotive and military standard connectors are available
- Connection

Red	Pin A	Pin 1	Supply
Yellow	Pin B	Pin 2	Pressure Signal A
Green	Pin C	Pin 3	Pressure Signal B
Blue	Pin D	Pin 4	Pressure Signal C
White	Pin E	Pin 5	Pressure Signal D
Black	Pin G	Pin 7	Ground

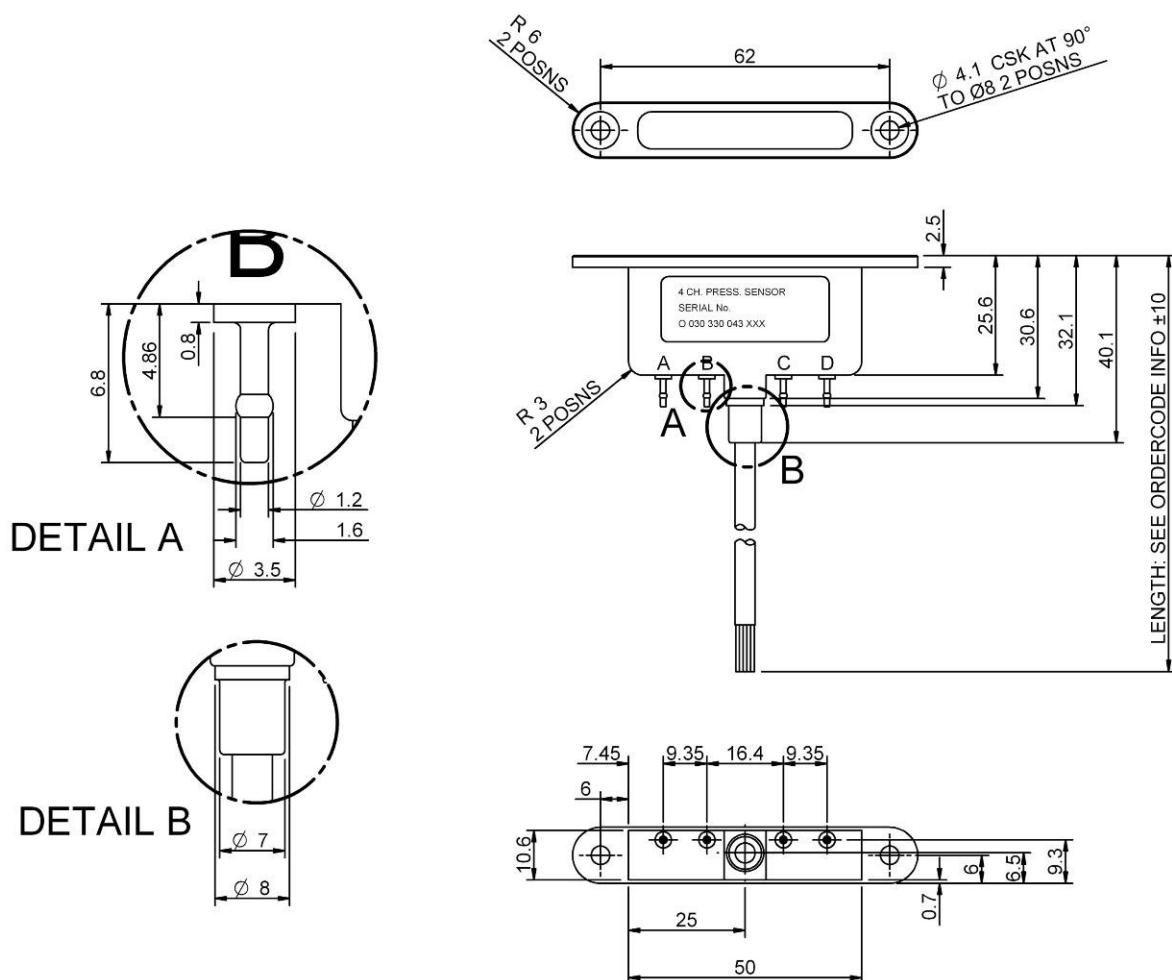
Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Please contact our technical consultancy service who will be pleased to help.

Environmental

- Minimum pressure 0 bar
- Maximum pressure 3bar
- Body resistant to standard motorsport fluids, diaphragm is only suitable for use with non-corrosive gas
- Maximum humidity 100% but water should not be allowed to condense inside the sensor
- Operating temperature range -40 to +125°C
- Compensated temperature range 0 to 50°C
- DR25 jacketed cable
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

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Number of Channels	Cable Length	Order Code
4	1000mm	O 030 330 043 007

Other values of gain, offset and compensated temperature range are available

22/11/05